

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Canceled)

2. (Currently amended) ~~A DNA encoding a fragment of a protein comprising~~ An isolated polypeptide comprising an immunogenic fragment of the amino acid sequence of any one of SEQ ID NOs: 2, 4, and 6, wherein the fragment comprises at least eight consecutive residues of the sequence.

3-5. (Canceled)

6. (Currently amended) A method for producing the ~~protein of claim 3~~ polypeptide of claim 21, wherein the method comprises the steps of comprising:
providing a host cell transformed with a DNA encoding the polypeptide;
culturing the host cell ~~of claim 5~~, and
collecting the ~~protein~~ polypeptide from the host cell or a culture supernatant thereof.

7. (Canceled)

8. (Currently amended) A method for identifying a potential ligand for the ~~protein of claim 3~~ polypeptide of claim 21, wherein the method comprises the steps of comprising:
(a) contacting a candidate compound with the ~~protein of claim 3~~ polypeptide or a cell expressing the ~~protein of claim 3~~ polypeptide; and

(b) determining whether the candidate compound binds to the ~~protein of claim 3~~
polypeptide or cell, wherein binding to the polypeptide or cell is an indication that the candidate
compound is a potential ligand for the polypeptide, or the cell expressing the protein of claim 3.

9. (Currently amended) A method for identifying ~~an~~ a potential agonist for the ~~protein of~~
~~claim 3~~ polypeptide of claim 21, wherein the method comprises ~~the steps of:~~

(a) contacting a candidate compound with a cell expressing the ~~protein of claim 3~~
polypeptide; and

(b) determining whether the candidate compound ~~generates a signal that is an indicator of~~
~~activation of the protein of claim 3~~ induces the polypeptide to generate an ITIM signal activity,
wherein the activity is an indication that the candidate compound is a potential agonist for the
polypeptide.

10. (Currently amended) A method for identifying ~~an~~ a potential antagonist for the
~~protein of claim 3~~ polypeptide of claim 21, wherein the method comprises ~~the steps of:~~

(a) contacting a candidate compound with a cell expressing the ~~protein of claim 3~~
polypeptide; and

(b) determining whether ~~a signal as an indicator of activation of the protein of claim 3 is~~
~~reduced as compared with a detection result obtained in absence of the candidate compound~~ an
ITIM signal activity is reduced as compared with the activity in the absence of the candidate
compound, wherein a reduction in activity is an indication that the candidate compound is a
potential antagonist for the polypeptide.

11-13. (Canceled)

14. (Currently amended) A kit ~~to be used in the method of any one of claims 8 to 10 for~~
identifying a potential ligand, agonist, or antagonist of the polypeptide of claim 21, wherein the
kit comprises the polypeptide, at least one of:

~~(a) the protein of claim 3; and~~

~~(b) the host cell of claim 5.~~

15-20. (Canceled)

21. (New) An isolated polypeptide comprising the amino acid sequence of any one of SEQ ID NOs: 2, 4, and 6 with fifty or fewer amino acid substitutions, deletions, insertions, and/or additions, wherein the polypeptide has ITIM signaling activity.

22. (New) The polypeptide of claim 21, wherein the polypeptide comprises the amino acid sequence of any one of SEQ ID NOs: 2, 4, and 6 with thirty or fewer amino acid substitutions, deletions, insertions, and/or additions.

23. (New) The polypeptide of claim 21, wherein the polypeptide comprises the amino acid sequence of any one of SEQ ID NOs: 2, 4, and 6 with ten or fewer amino acid substitutions, deletions, insertions, and/or additions.

24. (New) The polypeptide of claim 21, wherein the polypeptide comprises the amino acid sequence of any one of SEQ ID NOs: 2, 4, and 6 with five or fewer amino acid substitutions, deletions, insertions, and/or additions.

25. (New) The polypeptide of claim 21, wherein the polypeptide comprises the amino acid sequence of SEQ ID NO: 2 with fifty or fewer amino acid substitutions, deletions, insertions, and/or additions.

26. (New) The polypeptide of claim 21, wherein the polypeptide comprises the amino acid sequence of SEQ ID NO: 4 with fifty or fewer amino acid substitutions, deletions, insertions, and/or additions.

27. (New) The polypeptide of claim 21, wherein the polypeptide comprises the amino acid sequence of SEQ ID NO: 6 with fifty or fewer amino acid substitutions, deletions, insertions, and/or additions.

28. (New) The polypeptide of claim 21, wherein the ITIM signaling activity is a tyrosine kinase activity.

29. (New) An isolated polypeptide encoded by a DNA that hybridizes under stringent conditions to a probe consisting of the complement of any one of SEQ ID NOs: 1, 3, and 5, wherein the polypeptide has ITIM signaling activity.

30. (New) The polypeptide of claim 29, wherein the ITIM signaling activity is a tyrosine kinase activity.

31. (New) An isolated polypeptide comprising the amino acid sequence of any one of SEQ ID NOs: 2, 4, and 6.

32. (New) The polypeptide of claim 31, wherein the polypeptide comprises the amino acid sequence of SEQ ID NO: 2.

33. (New) The polypeptide of claim 31, wherein the polypeptide consists of the amino acid sequence of SEQ ID NO: 2.

34. (New) The polypeptide of claim 31, wherein the polypeptide comprises the amino acid sequence of SEQ ID NO: 4.

35. (New) The polypeptide of claim 31, wherein the polypeptide consists of the amino acid sequence of SEQ ID NO: 4.

36. (New) The polypeptide of claim 31, wherein the polypeptide comprises the amino acid sequence of SEQ ID NO: 6.

37. (New) The polypeptide of claim 31, wherein the polypeptide consists of the amino acid sequence of SEQ ID NO: 6.

38. (New) The polypeptide of claim 2, wherein the polypeptide comprises at least twelve consecutive residues of the amino acid sequence of any one of SEQ ID NOs: 2, 4, and 6.

39. (New) The polypeptide of claim 2, wherein the polypeptide comprises at least fifteen consecutive residues of the amino acid sequence of any one of SEQ ID NOs: 2, 4, and 6.

40. (New) The polypeptide of claim 2, wherein the polypeptide comprises at least eight consecutive residues of the amino acid sequence of SEQ ID NO: 2.

41. (New) The polypeptide of claim 2, wherein the polypeptide comprises at least eight consecutive residues of the amino acid sequence of SEQ ID NO: 4.

42. (New) The polypeptide of claim 2, wherein the polypeptide comprises at least eight consecutive residues of the amino acid sequence of SEQ ID NO: 6.

43. (New) An isolated polypeptide, the amino acid sequence of which comprises a sequence at least 85% identical to any one of SEQ ID NOs: 2, 4, and 6, wherein the polypeptide has ITIM signaling activity.

44. (New) The polypeptide of claim 43, the amino acid sequence of which comprises a sequence at least 95% identical to any one of SEQ ID NOs: 2, 4, and 6.

45. (New) The polypeptide of claim 43, the amino acid sequence of which comprises a sequence at least 85% identical to SEQ ID NO: 2.

46. (New) The polypeptide of claim 43, the amino acid sequence of which comprises a sequence at least 85% identical to SEQ ID NO: 4.

47. (New) The polypeptide of claim 43, the amino acid sequence of which comprises a sequence at least 85% identical to SEQ ID NO: 6.

48. (New) The polypeptide of claim 43, wherein the ITIM signaling activity is a tyrosine kinase activity.